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NEW RECORDS OF JAMAICAN FLOWERING PLANTS, I

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FOR THE PAST SEVERAL YEARS the authors have been conducting surveys of the vegetation growing on bauxitic and related soils in Jamaica, B.W.I. (Jour. Arnold Arb. 38: 1-41, 151-169. 1957). In the course of this work it was possible to visit interesting geographical areas, sometimes *en route* between areas of mining operations, sometimes in areas off the beaten path where bauxite is only suspected to occur. In all of these forays our work was encouraged by Mr. C. Bernard Lewis, director of the Institute of Jamaica, and was financed in part by contributions from the Kaiser Bauxite Company and the Reynolds Jamaica Mines, Ltd. To Mr. Lewis and to officers and representatives of the contributing aluminum mining companies, we express our appreciation. We are also grateful to Dr. Lily M. Perry for her assistance with the Latin descriptions. The specimens cited are to be found in the herbaria of the Arnold Arboretum (A) or the Gray Herbarium (GH) and the Institute of Jamaica (IJ). A few specimens have been seen in the Hope Botanic Garden Herbarium now at the Department of Botany of the University College of the West Indies (UCWI). Duplicate specimens of our collections will be distributed to other herbaria.

Acrosynanthus jamaicensis, sp. nov.

RUBIACEAE

Frutex 3 m. altus, ramis teretibus, ramulis compressis hispidulis; stipulis late triangularibus apiculatis ciliatis usque 2 mm. longis, intus petiolo coalitis; foliis 3-4.5 cm. longis, 4-8 mm. latis lineari-lanceolatis, apice acutis basi cuneatis decurrentibusque, margine integris et valde recurvis utrinque resinaceis, supra atroviridibus hispidulis, subtus sparsim hispidulis, albescentibus (vivis vel siccis); petiolo 1-2 mm. longo, hispidulo, resinaceo; inflorescentia terminali cymosa, cymis 3-floris, pedunculo 1 cm. longo, bracteis minutis, minus quam 0.5 mm. longis; pedicello 1-2 mm. longo; hypanthio obovoideo, sepalis 4-5, ovato-lanceolatis, minus quam 1 mm. longis, crassis, apice patentibus recurvatis hispidulis; corollae lobis 4, uno plerumque majore, 2.5-3 mm. longis, oblongis, apice rotundatis utrinque dense pubescentibus (pilis clavatis), tubo similiter pubescente, 2.5-3 mm. longo; staminibus 4 tubi corollae basi affixis, filamentis minus quam 0.5 mm. longis, antheris elongatis acutis vel acuminatis 1 mm. longis;

disco piloso; stylo glabro, stigmatе bilobato, ovario 2-loculari, loculis 8–12-ovulatis; fructu maturo pallido-brunneo, 3 mm. diametro, seminibus pallido-brunneis tenuiter scrobiculatis.

Jamaica. PARISH OF TRELAWNY: Shrub on limestone sides of steep ravine, Ramgoat Cave district of the "cockpit" country, *Howard 14133* (A-type), *Howard & Proctor 14391* (A, 1J); *Mrs. Bernard Heineman, s.n.*, (1J).

This is the first record of the genus *Acrosynanthus* from outside Cuba. The genus, as currently known, was established by Urban (Symb. Antill. 7: 544. 1913) and monographed by Standley (N. Amer. Fl. 32: 43. 1918). Subsequently, three additional species were described, bringing the total to eight species, all from the Oriente province of Cuba. The genus is more or less distinct within the Rondeletieae where it has been assigned; however, it is badly in need of restudy and probably of redefinition. The present species with five sepals, 4 petals, one larger than the others, having a pubescent corolla inside and out and four stamens attached at the base of a very short corolla tube does not fit readily into the limitations of the genus as recognized by Urban and Standley. *Acrosynanthus jamaicensis* is easily recognized by the resinous covering of the leaves and young stems, as is often found in species of *Phialanthus* and *Antirhea*. The white color of the under surface of the revolute leaves draws attention to this plant in the field.

***Alvaradoa lewisii*, sp. nov.**

SIMARUBACEAE

Frutex 4 m. altus, ramis virgatis strictisque; foliolis 22–25, ellipticis vel oblongis supra medium latissimis, 1.5–2.5 cm. longis, 0.7–1 cm. latis, apice rotundatis vel retusis, basi angustatis vel rotundatis, margine valde recurvis, supra atroviridibus subtus pallida flavoviridibus, glabris; petiolo 1 mm. longo puberulo vel breviter adpresso-pubescente; inflorescentia terminali racemosa arcuatim pendula, rhachi aurea vel fulva puberula, pedicellis 9–11 mm. longis puberulis; fructu glabro, immaturo rubro, maturo flavo, lanceolato-ovoideo, 12–18 mm. longo, 6–7 mm. diametro, medio latissimo, utrinque angustato, carpellis (sterili fertilibusque) in magnitudine aequalibus.

Jamaica. PARISH OF TRELAWNY: A shrub on the steep face of a limestone ravine, Ramgoat Cave district in the "cockpit" country, *Howard 14128* (A-type).

Alvaradoa is a small genus of five species recently monographed by Cronquist (*Brittonia* 5: 133–137. 1944). Two of the species previously known have glabrous fruits, as does this. *Alvaradoa lewisii* differs from *A. jamaicensis*, the only species previously reported from Jamaica, in having leaflets oblong, broadest above the middle, with the margin strongly recurved, and the fruits longer than broad, but broadest at the middle and cuneate or narrowed at the base. *Alvaradoa jamaicensis* is based on a *Prior* specimen from Union Hill and most recent collections are from the central part of the island. *Alvaradoa lewisii* is from the "cockpit" country in the western third of the island of Jamaica, a region of noteworthy local endemism. The other glabrous-fruited species is *Alvaradoa arborescens*, from

Cuba, distinguishable from *A. lewisii* in having all three carpels equally developed with the styles at the same level, and in the shape of the fruit which tapers at the apex and the base.

Alvaradoa lewisii is named in honor of Mr. C. Bernard Lewis, director of the Institute of Jamaica, known for his work on the Pedro Cays, the Cayman Islands and many parts of Jamaica.

***Clusia portlandiana*, sp. nov.**

GUTTIFERAE

Frutex vel arbor epiphytica 4–7 m. alta; foliis obovatis planis, 13–18 cm. longis, 7.5–12 cm. latis, superiore $\frac{1}{3}$ latissimis, apice rotundatis vel truncatis, versus basin angustatis, sessilibus, costa supra leviter canaliculata subtus prominente, venis numerosis parallelis; inflorescentia terminali corymbosa, 12–15 cm. longa, 12–15-flora; bracteis primariis anguste triangularibus, 9–13 mm. longis, basi 6 mm. latis, apice acutis, infrequenter foliiformibus obovatis 3 cm. longis 2 cm. latis; floribus femineis pedunculatis; pedunculo 1 cm. longo; bracteolis 4 oppositis et decussatis; sepalis 4 orbiculari-ovatis carnosiss, siccis margine scariosis, 4–5 mm. longis latisque; petalis 5, ovatis carnosiss 5–6 mm. longis latisque, carinatis, margine scariosis; fructu oblongo, 1–1.5 cm. longo, 1 cm. diametro, 5-loculari, apice rotundatis, stigmatibus 5, sessilibus; floribus masculinis pedunculatis; pedunculo 6–8 mm. longo; bracteis 4; sepalis 4, petalis 5 ut in flore feminea, staminibus numerosis, filamentis 4 mm. longis, antheris 1 mm. longis.

Jamaica. PARISH OF PORTLAND: In mist forest on limestone, John Crow Mountains, alt. 1500–2500 feet, 1.5–2.5 mi. southwest of Ecclesdown, *Howard & Proctor* 14765 (A, IJ, fruit), *Proctor* 9797 (IJ, fruit), *Proctor* 993 (A-type; IJ, fruit), *Webster & Wilson* 5136 (A, male); summit of John Crow Mountains, east of Millbank, *Swabey* 13018 (UCWI, male).

Clusia portlandiana is similar to *C. venosa* and *C. krugiana* of the Lesser Antilles and Puerto Rico, differing from both in the larger inflorescence, longer peduncles and oblong fruit. In comparison with the other species reported from Jamaica, *C. portlandiana* is similar only to *C. clarendonensis*, differing in the larger leaves, larger inflorescence and the more numerous female flowers.

***Dipholis bullata*, sp. nov.**

SAPOTACEAE

Arbor parva usque 8 m. alta; foliis obovatis vel fere orbicularibus, plerumque 4–13 cm. longis 3.5–6.5 cm. latis, apice obtusis vel rotundatis, glabris coriaceis saepissime plus minusve bullatis propter margines revolutos, supra nitide atroviridibus subtus pallidioribus, costa subtus prominente, venis cetera subobscuris, petiolo 4–10 mm. longo; floribus in axillis 2–4, pedicello crasso minute sparsimque adpresso-strigoso, 5–10 mm., in fructu usque 15 mm. longo deinde suberoso-lenticellato; sepalis similibus *D. montana*; corolla ca. 5 mm. longa, tubo 2.5–3 mm. longo, lobis cucullatis, appendicibus lateralibus planis acuminatis sparsim erosis; filamentis ca. 1.2 mm. longis, antheris 0.6–0.8 mm. longis; staminodiis late ovatis,

marginis erosio, apice acutis vel subacuminatis filamentis subaequilongis vel paullo longioribus; stylo ca. 1 mm. longo, ovario glabro 5-loculari; fructu immaturo anguste ovoideo, apice truncato-apiculato, nitide olivaceo, ca. 15 mm. longo 5 mm. diametro, 1-spermo, semine immatura, hilo ut videtur laterali.

Jamaica. PARISH OF PORTLAND: In elfin-woodland over limestone (elevation about 2500 feet), John Crow Mountains, 1.5–2.5 miles southwest of Ecclesdown, January 24, 1956, *Howard, Proctor & Stearn 14759* (A-type; 1J, fruit); *Howard, Proctor & Stearn 14755* (with fewer, more immature fruit); September 14, 1956, *Howard & Proctor 14842* (flowers) (A, 1J).

Though obviously related to *Dipholis montana* of the Blue Mountains area, the present species differs rather strikingly in its somewhat larger, shining, bullate leaves, fewer flowers per cluster, longer pedicels, slightly smaller flowers and differently-shaped fruits. It is entirely unlike *D. octosepala*, another Jamaican congener with which *D. montana* has been compared.

***Myrica jamaicensis*, sp. nov.**

MYRICACEAE

Arbor parva 3–4 m. alta, ramulis sparsim piloso-pubescentibus, pilis brevibus crispis albisque; foliis ellipticis vel obovato-ellipticis, 3.5×2 , 4.5×2.5 , 6×3 cm., apice rotundatis vel truncatis, retusis, basi cuneatis decurrentibusque, margine undulatis supra medium grosse sinuato-denticulatis, utrinque aequaliter minute foveolato-puncticulatis et glandulosis, bullatis, costa subtus sparsim, supra breviter pilosa, venis primariis 5–6-paribus subtus sparsim breviter pilosis deinde glabrescentibus; petiolo 1–2 mm. longo, crispe et breviter piloso; inflorescentia feminea 8–9 mm. longa, bracteis 0.6–0.7 mm. longis apice obtusis; fructu subgloboso 3 mm. diametro, ceraceo-papillato, dense glanduloso.

Jamaica. PARISH OF PORTLAND: John Crow Mountains at 2500 feet, 2.5 miles southwest of Ecclesdown, *Howard & Proctor 14832* (A-type; 1J).

This species differs from the two common species of Jamaica and the West Indies, *Myrica cerifera* and *M. microcarpa*, in having broader leaves, rounded and retuse at the apex, the margin undulate and sinuate and not evidently toothed, the blades bullate between the prominent primary veins. The plant is less pubescent than the other species and, while the staminate inflorescence is not known to us, the fruits of this new species are more resinous than others we have seen. The similarity of *M. jamaicensis* is with *M. microcarpa* rather than with *M. cerifera*.

***Phialanthus myrtilloides* Griseb.**

RUBIACEAE

Jamaica. PARISH OF TRELAWNY: a shrub 2.5 m. tall, with arching branches, on limestone and steep slopes of ravine, Ramgoat Cave district of "cockpit" country, *Howard 14134* (A).

Two species of *Phialanthus* have been described and reported from Jamaica, with an additional seven species known from Cuba and one from Cuba and the Bahamas. The specimen cited above does not fit either of

the species known from Jamaica and is assigned to *P. myrtilloides*, a species described from Cuba but later recognized from the Bahamas, thus extending its range. *Phialanthus* is not well represented in herbaria and has not received comparative studies in the field. Certainly the taxonomic characters used by Standley in his treatment of the genus (N. Amer. Fl. 32: 281. 1934) are very weak. Further study will probably show that there are fewer species and greater variation than are currently recognized and nothing is to be gained by adding still another species at this time. The specimen cited is more heavily resinous than the other species of the genus. The leaves are lanceolate, broadest at the middle and only slightly recurved at the margin. The inflorescences are sessile and four flowers are produced. The corolla equals the calyx lobes in flower, but the calyx lobes soon expand until in fruit they exceed the tube in length. The stamens are shorter than the corolla lobes. The specimens we have seen from the Bahamas indicate a considerable variation in the size and shape of the leaves and the amount of resin produced. The Jamaican specimen can be included in this range of variation.

***Schefflera stearnii*, sp. nov.**

ARALIACEAE

Frutex 2–3 m. altus, glaber, inflorescentia excepta; ramis crassis teretibus prominenter lenticellatis; petiolo striato, 9–16 cm. longo prope basin lenticellato, ligulo simili *S. sciodaphyllum*; foliolis 5–8, majoribus minoribusque intermixtis, firme coriaceis, supra nitido-atroviridibus, subtus olivaceis, obovato-oblongis usque 18 cm. longis, 8 cm. latis, basi truncatis vel inaequalibus, apice abrupte acuminatis, margine cartilagineo integris aliquantum recurvis, costa praecipue subtus prominente, venis lateralibus utrinque prominulis, petiolulo 1–5 cm. longo; inflorescentia terminali ramosa, ramis ca. 6, 13–22 cm. longis, minute denseque ferrugineo-furfuraceo-pubescentibus, capitulis pedicellatis (pedicello 3–11 mm. longo), racemosis, 3–6-floris inter flores plus minusve setulosis; calyce coriaceo, inferiore $\frac{2}{3}$ dense ferrugineo-puberulo, 1.5–2 mm. longo, ca. 2 mm. diametro, minute dentato; petalis puberulis, 1.5–2 mm. longis; antheris 0.5–1 mm. longis; stylis viridibus, ca. 1 mm. longis, apice valde incurvis; fructu non viso.

Jamaica. PARISH OF PORTLAND: in mossy elfin-woodland over limestone, elevation about 2500 feet, John Crow Mountains, 1.5–2.5 miles southwest of Ecclesdown, March 9, 1957, *Proctor 16255* (IJ-type); *Howard, Proctor & Stearn 14761* (A, IJ, in bud).

In his treatment of *Schefflera* in North American Flora (28B(1): 25–29. 1944), A. C. Smith ascribes two species to the Jamaican flora. One of these, *S. troyana*, is characterized by its dense white tomentum; the other, *S. sciodaphyllum*, by being nearly glabrous in contrast. Other, less striking differences can be observed by closely comparing the descriptions of the two species. Another name, *Sciadophyllum praetermissum*, is reduced to synonymy under *Schefflera sciodaphyllum*, probably in the belief that it represents but a juvenile and more pubescent flowering stage of the latter

species. This is a point which needs to be settled by further collecting.

The present new taxon entirely lacks the white tomentum of *Schefflera troyana* and, in fact, differs from that species in many details. From *S. sciodaphyllum* it differs by its shorter petioles and fewer, shorter, bi-coloured leaflets of a different texture; by much shorter inflorescence branches covered with a rusty-scurfy pubescence different both quantitatively and qualitatively from the sparse, minute, whitish hairs of *S. sciodaphyllum*; by the fewer and strictly sessile (instead of pedicellate) flowers; by the slightly smaller calyx and shorter, puberulent petals; by the much shorter anthers of a different shape; and by the green (instead of carnose) styles.

Both *Schefflera stearnii* and *S. sciodaphyllum* occur in the John Crow Mountains more or less adjacent to each other. In our opinion, therefore, the differences between them cannot be attributed to contrasting environments.

Weinmannia portlandiana, sp. nov.

CUNONIACEAE

Arbor 2 m. alta, ramulis ultimis compressis atro-fuscis sparsim et breviter pubescentibus; foliis oppositis trifoliolatis glabris, foliolo terminali lanceolato-elliptico, 4–4.5 cm. longo, 1.5–2 cm. lato, apice acuto, basi cuneato, margine versus apicem crenato versus basin integro, venis supra leviter impressis subtus subobscuris, foliolis lateralibus oblongis vel ellipticis apice rotundatis basi obliquis uno latere cuneatis altero rotundatis, margine saltem supra medium crenatis, 2.5×1.7 cm.– 2.7×1.7 cm., petiolo 1.2–1.4 cm. longo alato, alis obovatis; inflorescentia terminali 8 cm. longa pseudoracemosa, rhaci sparsim et breviter pubescente; floribus hermaphroditis fasciculatis (2–5), bracteolis late ovatis usque 1 mm. longis, pedicello 4.5 mm. longo sparsim pubescente; calyce 4-partito, lobis ovatis usque 1 mm. longis; petalis oblongis 2–3 mm. longis; filamentis 4 mm. longis; pistillis 2, usque 5 mm. longis.

Jamaica. PARISH OF PORTLAND: John Crow Mountains at 2500 feet, about 2.5 miles southwest of Ecclesdown, *Howard & Proctor 14839* (A-type; IJ), *Proctor 11351* (IJ), *Howard, Proctor & Stearn 14770* (IJ).

The genus *Weinmannia* has been known previously in Jamaica by the variable and widespread *W. pinnata* L. and the pubescent form of the latter, *W. hirta* Sw. The present species differs from *W. pinnata* by having glabrous and strictly ternate leaves, the leaflets of which are larger than even the extreme forms of *W. pinnata*. *Weinmannia pinnata* as it occurs in the islands from Cuba to Grenada needs further taxonomic study. It is probable that a number of good subspecies or varieties will eventually be established in this complex. A comprehensive field study of various populations is required, however, to understand the morphological variations which occur and are represented in herbaria.

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